



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,943	05/16/2001	Takao Miyazaki	Q64477	1436

7590 03/19/2008  
SUGHRUE, MION, ZINN, MACPEAK & SEAS  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037

EXAMINER
----------

HUNTSINGER, PETER K

ART UNIT	PAPER NUMBER
----------	--------------

2625

MAIL DATE	DELIVERY MODE
-----------	---------------

03/19/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/855,943	<b>Applicant(s)</b> MIYAZAKI, TAKAO	
	<b>Examiner</b> PETER K. HUNTSINGER	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-10, 14, 15, 22, 23, 29, 30, 34, 37 and 39 is/are pending in the application.
- 4a) Of the above claim(s) 7-10, 22, 23, 29, 30, 34, 37 and 39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/07 has been entered.

2. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Election/Restrictions***

3. Applicant's election without traverse of Species III in the reply filed on 2/6/08 is acknowledged.

### ***Response to Arguments***

4. Applicant's arguments filed 10/19/07 have been fully considered but they are not persuasive.

Applicant argues on pages 11 and 12 of the response in essence that:

Tanaka '341 does not disclose that the test pattern is arranged at a lateral side of the row (claim 14) or at a downstream side of a row (claim 15). The positioning cannot inherently occur at the position indicated by both claims.

a. Tanaka '341 discloses printing a test pattern (Fig. 3, col. 9, lines 1-6). The test pattern is considered arranged at a lateral side of a row because it is situated on the side of the row (i.e. traverses from left to right inside the row). Further, the test pattern includes "Element No. 13" (Fig. 3) which is clearly adjacent the recorded check result. The test pattern is considered arranged at a downstream side of a row because following the row for "Element No. 13" (Fig. 3), there is recorded a check result for Elements No. 14-24.

***Claim Objections***

5. Claims 14 and 15 are objected to because of the following informalities: For claims 14 and 15, in line 12 change "recording said row" to "recording a row".
- Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki '361 in view of Tanaka '341.

Referring to **claim 14**, Suzuki '361 discloses a serial printing method for recording an image on a recording material one line by one line, said line including a plurality of rows of which recording is performed by moving a recording head in a sub-scanning direction which is a width direction of said recording material, and said recording head having a plurality of recording elements arranged in a main-scanning direction perpendicular to said sub-scanning direction, said serial printing method comprising the steps of:

recording said rows with said recording head (S161 of Fig. 32, col. 24, lines 16-22+);

detecting the broken recording element among said recording elements, said broken recording element being impossible to record due to its failure (col. 4, lines 7-10+), based on whether a difference between a value output by the broken recording element and a reference value exceeds a predetermined threshold (col. 21-22, lines 60-67, 1-13, detects whether the recording unevenness is more than a given value);

and recording said row to be recorded with said broken recording element, by moving said recording head again and by using another normal recording element among said recording elements when the difference exceeds the predetermined threshold, wherein recording said row again occurs on the same sheet of the recording material as the previous recording (S171 of Fig. 32, col. 24, lines 29-44+).

Suzuki '361 does not disclose expressly measuring the density of a test pattern.

Tanaka '341 discloses wherein a broken recording element is detected by measuring a density of a test pattern recorded by a recording head (Fig. 3, col. 9, lines 1-6+),

wherein said test pattern is arranged at a lateral side of said row in said sub-scanning direction (Fig. 3, col. 9, lines 1-6, test pattern is considered arranged at a lateral side of a row because it is situated on the side of the row).

At the time of the invention, it would have obvious to a person of ordinary skill in the art to measure density in a test print. The motivation for doing so would have been to verify all nozzles in a print jet are functioning correctly. The advantage of a test print over testing an ordinary document is that the test print ensures that each print element is tested and a print element in printing an ordinary document may not be tested.

Therefore, it would have been obvious to combine Tanaka '341 with Suzuki '361 to obtain the invention as specified in claim 14.

Referring to **claim 15**, Suzuki '361 discloses a serial printing method for recording an image on a recording material one line by one line, said line including a plurality of rows of which recording is performed by moving a recording head in a sub-scanning direction which is a width direction of said recording material, and said recording head having a plurality of recording elements arranged in a main-scanning direction perpendicular to said sub-scanning direction, said serial printing method comprising the steps of:

recording said rows with said recording head (S161 of Fig. 32, col. 24, lines 16-22+);

detecting the broken recording element among said recording elements, said broken recording element being impossible to record due to its failure (col. 4, lines 7-10+), based on whether a difference between a value output by the broken recording element and a reference value exceeds a predetermined threshold (col. 21-22, lines 60-67, 1-13, detects whether the recording unevenness is more than a given value);

and recording said row to be recorded with said broken recording element, by moving said recording head again and by using another normal recording element among said recording elements when the difference exceeds the predetermined threshold, wherein recording said row again occurs on the same sheet of the recording material as the previous recording (S171 of Fig. 32, col. 24, lines 29-44+).

Suzuki '361 does not disclose expressly measuring the density of a test pattern.

Tanaka '341 discloses wherein a broken recording element is detected by measuring a density of a test pattern recorded by a recording head (Fig. 3, col. 9, lines 1-6+),

wherein said test pattern is arranged at a downstream side of said row in said main-scanning direction (Fig. 3, col. 9, lines 1-6, following the row for "Element No. 13", there is recorded a check result for Elements No. 14-24).

At the time of the invention, it would have obvious to a person of ordinary skill in the art to measure density in a test print. The motivation for doing so would have been to verify all nozzles in a print jet are functioning correctly. The advantage of a test print over testing an ordinary document is that the test print ensures that each print element is tested and a print element in printing an ordinary document may not be tested. Therefore, it would have been obvious to combine Tanaka '341 with Suzuki '361 to obtain the invention as specified in claim 15.

### ***Conclusion***

8. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER K. HUNTSINGER whose telephone number is (571)272-7435. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PKH

/David K Moore/  
Supervisory Patent Examiner, Art Unit 2625